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Research, Education, and Economics

ARS ❑ CSREES ❑ ERS ❑ NASS

Policies and Procedures

Title: ARS Energy Management Plan

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Procurement and Property Division

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Distribution: Headquarters, Areas, and Locations

This Directive establishes the ARS Energy Management Plan (Exhibit 1) as the uniform policy and procedures for the conservation and management of energy and water within the Agency.

Table Of Contents

1. Background

The National Energy Conservation Policy Act of 1978 (PL 95-619), as amended by the Federal Energy Management Improvement Act of 1988 (PL 100-615) and the Energy Policy Act of 1992 (PL 102-486), including Executive Orders (EO) 12759 (April 17, 1991) and EO 12902 (March 8, 1994), established the energy management goals and requirements for Federal Government. Each Federal agency is required to develop and implement its energy management plan dealing with the use of energy and water within the agency's facilities and operations.

C AUTHORITIES

National Energy Conservation Policy Act (PL 95-619)
Federal Energy Management Improvement Act (PL 100-615) Energy Policy Act (PL 102-486)
Executive Order 12759 and Executive Order 12902

D POLICY

The ARS operational policy, procedures, and responsibilities for the conservation and management of energy and water shall be as prescribed in the ARS Energy Management Plan (Exhibit 1).

R. D. PLOWMAN
Administrator

Exhibit

1 ARS Energy Management Plan

U.S. DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

ENERGY MANAGEMENT PLAN

SECTION 1.0 - INTRODUCTION

1.1 SCOPE OF ARS ENERGY MANAGEMENT PLAN

The scope of ARS Energy Management Plan is Agencywide encompassing policy, procedures, and activities relating to:

(a) Federal buildings and facilities owned and leased by ARS;

(b) Federal buildings and facilities delegated to ARS by GSA;

(c) Equipment owned, assigned or leased including vehicles, aircraft, and vessels;

(d) Internal operations and procedures as they impact on the consumption of energy such as travel, procurement, work habits, etc.; and

(e) Management and employee awareness of the energy program and its objectives, and their role in meeting these objectives.

1.2 GOALS AND REQUIREMENTS OF NECPA AND EXECUTIVE ORDERS

The National Energy Conservation Policy Act of 1978 (NECPA) (PL 95-619), as amended by the Federal Energy Management Improvement Act of 1988 (PL 100-615) and the Energy Policy Act of 1992 (PL 102-486), and all applicable Executive Orders (EO) including EO 12759 (April 17, 1991) and EO 12902 (March 8, 1994), established the energy management goals and requirements for Federal Government.

Refer to Appendix 2, 3, and 4, for the amended portions of NECPA; Appendix 5 (EO 12759); and Appendix 6 (EO 12902).

(a) 20 percent reduction in Federal building energy consumption per GSF by FY 2000 (compared to FY 1985);

(b) 30 percent reduction in Federal building energy consumption per GSF by FY 2005 (compared to FY 1985);

(c) Install all energy and water conservation measures with payback periods of less than 10 years by January 1, 2005;

(d) 20 percent increase in energy efficiency in industrial facilities by FY 2005 (compared to FY 1990);

(e) Procure energy efficient goods and products;

(f) Minimize petroleum use in Federal buildings and facilities by switching to less-polluting or non-petroleum-based energy source, such as natural gas or solar and other renewable energy sources;

(g) Utilize innovative financing and contractual mechanisms such as utility Demand-Side Management (DSM) services and Energy Savings Performance Contracts (ESPC); and

(h) 10 percent reduction in gasoline and diesel fuel consumption in motor vehicles by FY 1995 (compared to FY 1991), through use of alternative fuels; improvement in fuel efficiency of existing fleets; and use of Alternative Fuel Vehicles (AFV).

1.3 ARS ENERGY POLICY

The energy policy of ARS is to foster energy management practices within the Agency which will ensure the most efficient use of energy and water possible, while maximizing the ability of the Agency to accomplish its research mission and maintaining the health and safety of its employees and visitors.

ARS has a mission to provide access to agricultural information and develop new knowledge and technology needed to solve technical agricultural problems of broad scope and high national priority to ensure adequate availability of high-quality, safe food and other agricultural products to meet the nutritional needs of the American consumer, to sustain a viable and competitive food and agricultural economy, to enhance quality of life and economic opportunity for rural citizens and society as a whole, and to maintain a quality environment and natural resource base.

1.4 ENERGY MANAGEMENT GOALS FOR ARS BUILDINGS AND FACILITIES

ARS recognizes the importance of conservation and will continue to promote the efficient use of energy and water within the Agency. Because the high cost and quantity of energy and water required by ARS directly impacts the limited operating funds to accomplish its research missions, it is ARS' goal to continue to improve the management and operation of its buildings and facilities to achieve higher levels of energy and water efficiency. In support of this goal, ARS will institute/emphasize operation and maintenance (O&M) conservation programs and employee awareness programs, and will use energy efficient technologies in the design and construction of ARS buildings and facilities.

To the extent available Agency resources will allow, ARS will survey its buildings and facilities, perform comprehensive energy audits and life cycle cost analyses, and accomplish all cost-effective energy conservation measures by FY 2005. ARS will take advantage of Energy Savings Performance Contracts (ESPC), Demand-Side Management (DSM) services, and utility rebates to reduce the direct cost to the Agency.

Due to economic considerations, ARS will focus its energy and water conservation efforts in larger Agency-

owned buildings and facilities (those containing at least 10,000 GSF of space), which are energy intensive and have the most potential for energy reduction.

1.5 EXCLUDED BUILDINGS/FACILITIES

In accordance with NECPA, the Agency may exclude any Federal building, or collection of Federal buildings from the energy reduction goals established for FY 2000 and FY 2005, if the Agency finds that compliance with such requirements would be impractical. A finding of impracticality shall be based on the energy intensiveness of activities carried out in such Federal buildings or collection of Federal buildings, the type and amount of energy consumed, and the technical feasibility of making the desired changes.

Because the energy-intensive research activities within ARS facilities (in addition to economic and health and safety reasons identified below) will NOT allow the Agency to achieve a 20 percent reduction in building energy consumption per GSF by FY 2000 and 30 percent reduction by FY 2005 (compared to FY 1985), ARS is designating all Agency-owned, leased, or maintained buildings and facilities to be "EXEMPT" from these energy reduction goals.

(a) The nature of ARS space and building inventory (over 3,000 buildings with an average size less than 4,000 square feet), widely dispersed around the United States. The expense of engineering surveys, energy audits, retrofit, and energy monitoring is not always cost-effective.

(b) Different utilization levels to satisfy mission needs. FY 2000 and FY 2005 reduction goals based upon assumptions that Agency mission remains at FY 1985 levels.

(c) The Agency has been accomplishing energy conservation projects since the early 1980s. Most obvious and high energy saving measures were already completed before 1985. The remaining potential energy conservation opportunities are limited, generally expensive, and will produce less energy savings.

(d) Building modifications and changes in tenant operations that have taken place since 1985, including changes in climate conditions, have increased the demand for energy. Examples include installation of more fume hoods, refrigeration cold boxes, constant temperature rooms, building additions, conversion of existing office space to laboratories, and increased use of personal computers.

(e) Actual energy savings will not be effectively tracked due to constant renovation work. In addition, energy conservation actions at some facilities will not be cost-effective due to planned building modernization.

(f) Current code requirements for increased ventilation to enhance health and safety of personnel will increase the demand for energy. Most ARS research laboratory buildings are old with antiquated heating, ventilation, and air conditioning (HVAC) systems designed to heat or cool a mixture of minimum amount fresh air and maximum amount of recirculated building air for ventilation purposes. Current laboratory design standards discourage this practice due to inherent potential health hazards

to building occupants. As part of the Agency's effort to modernize ARS facilities, these old and antiquated HVAC systems are to be replaced with systems that will heat and cool 100 percent fresh air (no recirculation), which will result in dramatic increase in cooling and heating energy demand over the previous levels.

(g) Major effort is needed to validate the Agency's energy usage using the National Finance Center's (NFC) records. The NFC's energy/travel report subsystem is an old, non-database type system which is in need of modernization to allow better utilization and verification of the data. It has no ability to match energy consumption periods with utility billings. Data is not readily available on a site-by-site or building-by-building basis.

(h) Lack of individual utility meter (by energy source) for more than 3,000 ARS buildings will not allow the Agency to establish baseline, measure, and tract consumption on a building-by-building or energy type basis. Many buildings are supplied by a central heating/cooling plant and serviced by only one or two gas and electric meters for several structures. Installation of separate utility meter by energy source for all buildings is not considered practical.

1.6 USE OF LIFE CYCLE COST METHODS AND PROCEDURES

(a) The design of new ARS buildings and facilities, and the application of energy conservation to existing buildings, shall be made using the life-cycle cost methods and procedures of the National Institute of Standards and Technology (NIST) Handbook 135, "Life-Cycle Costing Manual for the Federal Energy Management Program".

(1) Use the **Total Life Cycle Cost** (TLCC) method to determine project cost effectiveness.

(2) Use the **Savings-To-Investment Ratio** (SIR) method to compare and rank nonmutually exclusive projects to establish their relative priorities.

(b) In leasing buildings for its own use or that of another agency, ARS shall fully consider the efficiency of all potential building space at the time of renewing or entering into a new lease.

1.7 BUDGET TREATMENT AND FUNDING FOR ENERGY CONSERVATION MEASURES

In accordance with NECPA, ARS shall specifically designate funds to implement the requirements of the Act in its budget request. In addition to available appropriations, ARS shall take maximum advantage of the following funding and contract mechanisms to accomplish energy and water conservation measures.

(a) DOE's "Federal Energy Efficiency Fund (FEEF)" grant program.

(b) Energy Savings Performance Contracts (ESPC) authorized under Title VIII of NECPA, as amended,

(c) Demand-Side Management (DSM) services and other incentives offered by private sector energy service providers.

1.8 INCENTIVES FOR ENERGY CONSERVATION

(a) As authorized by NECPA, 50 percent of the energy and water cost savings realized by the Agency, with respect to funds appropriated for any fiscal year beginning after FY 1992 (including financial benefits resulting from ESPC under Title VIII and utility rebates), shall remain available for expenditures by the Agency for additional energy efficiency measures which may include related employee incentive programs, particularly at those facilities at which energy savings were achieved.

(b) DOE annually presents the Federal Energy Efficiency Awards. These awards recognize outstanding achievements in the reduction of energy and water consumption within the Federal Government. The call for Agency nominees usually occurs in the winter for accomplishments in the prior fiscal year.

(c) To encourage active energy conservation efforts within the Agency, HQ/Areas/Locations shall institute an annual award program recognizing those employees who have contributed most to energy efficiency and water conservation. Priority considerations shall be given to those employees who have assisted the conservation program through their own initiative.

1.9. ENERGY MANAGEMENT TRAINING

In accordance with NECPA, ARS shall establish and maintain a program to ensure that all its facility energy managers are "Trained Energy Managers".

The term "Trained Energy Manager" means a person who has demonstrated proficiency, or who has completed a course of study in the areas of fundamentals of building energy systems, building energy codes and applicable professional standards, energy accounting and analysis, life-cycle cost methodology, fuel supply and pricing, and instrumentation for energy surveys and audits.

The HQ/Areas/Locations shall encourage employees to participate in energy manager training courses. Employees may enroll in courses of study in the areas described above including, but not limited to courses offered by private or public educational institutions; Federal agencies; or professional associations.

1.10 ROLE AND RESPONSIBILITIES - (Headquarters)

The Administrative and Financial Management (AFM) will be responsible for central planning, coordination, and support for the implementation of this Energy Management Plan.

(a) **Facilities Division (FD), AFM** will:

(1) Develop policies/procedures to achieve energy efficient design and construction of ARS buildings and facilities.

(2) Serve as the primary liaison related to energy and water conservation activities of the Agency.

(3) Prepare and coordinate submission of the Agency Annual Energy Management Report.

(b) **Procurement and Property Division (PPD), AFM** will:

(1) Develop policies/procedures to achieve energy efficiency in the management and operation of ARS motor vehicles through reduction of gasoline and diesel fuel consumptions; use of alternate fuels; and acquisition of Alternative Fuel Vehicles (AFV).

(2) Establish program of incentives for conserving energy by utilizing Energy Savings Performance Contracts (ESPC), to include implementing procedures for entering into such contracts, and identifying, verifying, and utilizing cost savings from such contracts.

(3) Prepare/submit annual energy management report that addresses prior year accomplishments, milestones, and actions planned to further implement the ARS Energy Management Plan involving procurement of energy efficient goods and services; utilization of Energy Savings Performance Contracts (ESPC) and Demand-Side Management (DSM) services; and reduction of gasoline and diesel fuel consumption of ARS motor vehicles.

(c) **Financial Management Division (FMD), AFM** will:

Develop policies, planning, reporting and evaluation programs related to financial accounting and controls of cost savings realized from ESPC entered into by the Agency pursuant to Title VIII of NECPA.

The Area Administrative Office (AAO) and Location Administrative Office (LAO), referred to herein as Areas/Locations, shall be responsible for field administration and management of this Energy Management Plan.

The Areas/Locations will:

(a) Institute/emphasize operation and maintenance (O&M) conservation programs and employee awareness programs.

(b) Perform preliminary energy surveys, comprehensive energy audits, life-cycle cost analyses, and accomplish building retrofit including installation of separate utility meter by energy source in individual buildings and facilities, as appropriate.

(c) Utilize, to the maximum extent possible, DOE's "Federal Energy Efficiency Fund (FEEF)" grant program and the Energy Savings Performance Contracts (ESPC) authorized by NECPA, to accomplish cost-effective energy conservation measures.

(d) Review its procedures to acquire utility and other related services, and to the extent practicable, remove any impediments to receiving, utilizing, and taking advantage of Demand-Side Management (DSM) services, incentives, and rebates offered by utilities and other private sector energy service providers.

(e) Ensure that its facility energy managers are "Trained Energy Managers". See Section 1.13(p) for detail.

(f) Designate a building within the Area as a showcase facility highlighting energy and water efficiency.

(g) Prepare/submit annual energy management report addressing the Area/Location accomplishments, milestones, and actions planned to further implement the ARS Energy Management Plan.

1.12 ABBREVIATIONS

AAO - Area Administrative Office
AFV - Alternative Fuel Vehicles
AFM - Administrative and Financial Management, ARS
ARS - Agricultural Research Service, USDA
CFR - Code of Federal Regulations
DOE - U.S. Department of Energy
DSM - Demand-Side Management
EO - Executive Order
ESPC - Energy Savings Performance Contracts
FAR - Federal Acquisition Regulation
FD - Facilities Division, AFM
FEEF - Federal Energy Efficiency Fund
FMD - Financial Management Division, AFM
FY - Fiscal Year
GSA - General Services Administration
GSF - Gross Square Feet
LAO - Location Administrative Office
NECPA - National Energy Conservation Policy Act
OO - Office of Operations, USDA
O&M - Operation and Maintenance
PPD - Procurement and Property Division, AFM
PL - Public Law
SIR - Savings-to-Investment Ratio
TLCC - Total Life-Cycle Cost
USDA - U.S. Department of Agriculture

1.13 DEFINITIONS

The following terms shall, for the purpose of this Energy Management Plan, have the meaning as defined herein.

(a) **Comprehensive Energy Audit** - A formal review of individual buildings to identify retrofit actions or options and estimate the costs and benefits of those deemed applicable, normally limited to consideration of systems using large amounts of energy and readily available proven energy conservation technologies.

(b) **Cost-Effective** - The condition whereby an action saves more than it costs over the life of the improvement, building, or action.

(c) **Demand-Side Management (DSM)** - Refers to utility-sponsored programs that increase energy efficiency and water conservation or the management of demand. The term includes load management techniques.

(d) **Energy Conservation** - Use of minimum amount of energy and water to achieve a given objective or result through changes in operation and maintenance (O&M) procedures and modifications of building and/or equipment.

(e) **Energy Conservation Measures** - Measures that are applied to a Federal building that improve energy efficiency and are life-cycle cost effective and that involve energy conservation, cogeneration facilities, renewable energy sources, improvements in operations and maintenance efficiencies, or retrofit activities.

(f) **Energy Management** - The traditional functions of management (planning, organizing, directing, and controlling) applied to energy and water resources, conservation, and efficiency.

(g) **Energy Savings Performance Contracts (ESPC)** - (Formerly known as Shared Energy Savings Contracts). Refers to a contract under which the contractor incurs the cost of implementing energy savings measures including, but not limited to, performing the energy audits, designing the project, acquiring and installing equipment, training personnel, and operating and maintaining equipment. In exchange for its investments, the contractor receives a share of any energy cost savings directly resulting from implementation of such conservation measures during the term of the contract.

(h) **Energy Source** - Nonrenewable sources such as electricity, fuel oil, natural gas, liquefied petroleum gas, coal, purchased steam, and renewable sources such as agriculture and urban waste, geothermal energy, solar energy, and wind energy.

(i) **Energy Use** - Energy that is used at a building or facility measured in terms of energy delivered to the building or facility.

(j) **Federal Building** - Any building, structure, or facility, or part thereof, which is constructed, renovated, purchased, in whole or in part for use by the Federal Government and which consumes energy or water. It shall also include any building leased in whole or in part for use by the Federal Government where the term of the lease exceeds 5 years.

(k) **Industrial Facilities** - Any building, structure, or facility, or part thereof, that uses large amounts of capital equipment and energy in connection with any process or system for the production of goods that is not devoted to the heating, cooling, ventilation, or service hot water requirements of the building.

(l) **Preliminary Energy Survey** - The determination of energy consumption characteristics of existing Federal buildings and facilities including the size, type, and consumption, to establish priorities for conducting comprehensive energy audits.

(m) **Retrofit** - Physical changes to a building or its equipment to achieve higher levels of energy efficiency. For the purpose of this Plan, retrofit actions may include installation of separate utility metering device to measure actual energy use of a building by energy source (i.e., electric, natural gas, heating oil, LPG, steam, etc.) and providing dual fuel capability to major equipment using petroleum-based energy source.

(n) **Savings-To-Investment Ratio (SIR)** - An economic evaluation technique which expresses the savings as a ratio to costs, and calculated pursuant to the methodology prescribed in the National Institute of Standards and Technology (NIST) Handbook 135, "Life-Cycle Costing Manual for the Federal Energy Management Program". The SIR analysis method is used for comparing and ranking nonmutually exclusive projects to determine their relative priorities.

(o) **Total Life-Cycle Cost (TLCC)** - An economic evaluation technique that sums the costs of owning, operating, and maintaining a building over its useful life (including such costs as fuel, energy, labor, and replacement components) and calculated pursuant to the methodology prescribed in the National Institute of Standards and Technology (NIST) Handbook 135, "Life-Cycle Costing Manual for the Federal Energy Management Program". In the case of leased buildings, the total life-cycle cost is calculated over the effective remaining term of the lease. The TLCC analysis method is used to determine project cost-effectiveness.

SECTION 2.0 - EXISTING FACILITIES

2.1 GENERAL

In accordance with NECPA and EO 12902, Federal agencies shall reduce energy consumption in existing Federal buildings by 20 percent by FY 2000 and 30 percent by FY 2005. Although ARS elected to designated its buildings and facilities to be "EXEMPT" from these energy reduction goals, EO 12902 requires that ARS implement a plan to improve energy and water efficiency in such exempt facilities by performing preliminary energy surveys, comprehensive energy audits, life-cycle cost analyses, and installing all cost-effective energy and water conservation measures no later than January 1, 2005.

The procedures contained in this section apply to both owned and leased facilities, however, see Section 4.0 to determine application for leased space.

The first action which should be implemented by the Areas/Locations is to institute and/or emphasize operation and maintenance (O&M) conservation programs, and employee awareness programs in all facilities. Recommended energy conservation actions in these areas are included in Section 2.7.

The Areas/Locations shall conduct preliminary energy surveys to identify facilities which have potential for energy use reduction. This should be followed by comprehensive energy audits to identify potential retrofit actions. Retrofit efforts should be directed first to Agency-owned buildings and facilities exceeding 10,000 gross square feet, which are heated and/or cooled.

2.2 PRELIMINARY ENERGY SURVEY

A preliminary energy survey is a determination of energy consumption characteristics of existing Federal buildings and facilities. In accordance with EO 12902, the information obtained from preliminary energy surveys shall be used to establish priorities for conducting comprehensive energy audits. Because the EO 12902 requires completion of comprehensive energy audits of approximately 10 percent of the Agency's facilities each year, it is necessary that the Areas/Locations accomplish the preliminary energy surveys as soon as possible.

In order to establish the Agency's priorities for comprehensive energy audits, the Areas/Locations shall complete the Preliminary Energy Survey Worksheet provided in Appendix 1 and submit to the Facilities Division (FD) by **August 1, 1995**.

In conducting a preliminary energy survey, the Areas/Locations should identify:

(a) the **location** of the facility including street address and community, if any, county, state, and zip code;

(b) the **total gross square feet and number of buildings** within the facility during FY 1985, FY 1990, and FY 1994;

(c) the **total energy use** of the facility in BTU's by energy source for FY 1985, FY 1990, and FY 1994; and

(d) the **climatic zone** in which the facility is located and/or the heating and cooling degree days.

2.3 COMPREHENSIVE ENERGY AUDIT

A comprehensive energy audit is intended to be a study of individual building to identify potential energy conservation measures to improve energy efficiency. Energy conservation actions may include modification to the building, its equipment, or O&M procedures.

The NECPA requires that priority for accomplishing retrofit actions be given to energy saving adjustments in O&M procedures before actions that require substantial structural modification or installation of equipment.

EO 12902 requires Federal agencies to conduct comprehensive energy audits of approximately 10 percent of the Agency's buildings and facilities each year and to install all cost-effective energy and water conservation measures no later than FY 2005. In addition, the EO requires agencies to minimize the use of petroleum products for facilities operations or building purposes, by switching to an alternative energy source if it is estimated to minimize life-cycle costs and which will not violate Federal, State, or local clean air standards.

To satisfy these requirements, the Areas/Locations shall conduct comprehensive energy audits as soon as possible after completion of the preliminary energy survey and to implement cost-effective energy and water conservation measures including installation of separate utility meter (by energy source) in individual buildings, to the extent possible beginning FY 1996.

The comprehensive energy audits shall be conducted in accordance with the methodology outlined in the "Architect and Engineer's Guide to Energy Conservation in Existing Buildings", DOE/RL/01830P-H4. (Copies are available through the USDA Office of Operations).

To satisfy the reporting requirements of the Department, the Facilities Division (FD) will annually call for Areas/Locations to report on their planned and completed comprehensive energy audits and retrofit actions to track progress toward meeting the goals and requirements of EO 12902 and NECPA, as amended. (See Section 8.4 for detail).

2.4 BUILDING RETROFIT ANALYSIS

During the comprehensive energy audits, several opportunities for energy retrofit will be identified. Some buildings may even have 10-20 possible retrofit actions, each having some measure of benefit. Many of these could have a major effect with little expenditure. Others will require considerable capital outlay to achieve a net savings over time. When potential retrofit actions have been identified, each action must be prioritized since it is unlikely that funding for all actions will be assigned simultaneously in the same fiscal year. Assuming a limited

amount of available funding, it is important that the actions funded represent those that are most cost-effective as determined by using the life-cycle cost methods and procedures of NIST Handbook 135 "Life Cycle Costing Manual for the Federal Energy management Program". (See Section 1.6 for detail)

2.5 PLANNING AND PROGRAMMING

All potential retrofit actions shall be prioritized according to their Savings-to-Investment Ratio (SIR) and to program actions starting with those that are determined to be most cost-effective. Retrofit shall include all actions necessary to accomplish switching to alternative energy source and the installation of individual building utility meter by energy source, as appropriate. Use of private sector energy services, Energy Savings Performance Contracts (ESPC), and utility rebates is encouraged.

2.6 SHOWCASE OF EXISTING FACILITIES

In accordance with EO 12902, the Agency shall designate one of its major buildings to become a showcase facility highlighting energy and water efficiency. Each Area shall designate at least one of its major buildings as showcase facility to highlight the energy conservation accomplishments of the Agency. Selection of such facilities shall be based on considerations such as level of non-Federal visitor, historic significance, and the likelihood that visitors will learn from displays and implement similar projects.

2.7 RECOMMENDED ENERGY CONSERVATION ACTIONS IN EXISTING BUILDINGS

2.7.1 Occupant Conservation Actions

(a) Turn off lights/office equipment when not in use.

(b) Reduce use of elevators. Walk down two flights or up one flight instead of using elevators.

(c) Keep windows/doors shut in areas that are being heated or cooled.

(d) Close blinds, shades, and drapes at night during the heating seasons to reduce heat loss through the window area. Open them during the day to use the sun for heating the rooms.

(e) Close blinds, shades, and drapes during the day in summer. These interior shading devices can reduce heat gain in the room as much as 50 percent.

(f) Minimize overtime work. Consolidate work areas of after-hours workers to minimize the amount of space that must be heated, air conditioned, and lighted.

(g) If rooms are individually controlled by thermostats, keep temperatures above 76 degrees F in the

summer and below 70 degrees F in the winter.

(h) Avoid use of fans and space heaters if the building HVAC systems are operating.

(i) Do not block HVAC air distribution outlets with books, furniture, etc.

(j) Keep energy conservation awareness a priority by way of staff meetings, newsletters, posters, etc.

2.7.2 Facility Managers O&M Conservation Actions

(a) Institute and emphasize energy conservation awareness programs for building occupants, promulgating actions indicated in section 2.7.1.

(b) Perform inspections of the facility to determine compliance with temperature and lighting criteria, condition of equipment, piping, and controls, and need for repair.

(c) Do not add heat to keep buildings warmer than 55 degrees F when unoccupied in the heating season.

(d) Keep the building envelope, equipment and systems properly maintained to promote efficient operation of HVAC systems.

(e) Keep temperatures between 65 and 70 degrees F in the heating season and between 76 and 80 degrees F in the cooling season, where practicable (41 CFR 101).

(f) Do not cool buildings when unoccupied, except as required to achieve target temperature ranges during occupied hours in extreme weather conditions.

(g) Review building operating plans and tailor start-up and shut-down times of HVAC systems so that target temperature ranges are met within 1 hour of occupants arriving and departing the building, taking into account outdoor temperatures.

(h) Reduce operating hours of HVAC systems, ventilation systems, water heating systems, lighting systems, escalators and elevators, and equipment and machines.

(i) Lower humidification/raise dehumidification setpoints.

(j) Install locking thermostats to prevent unauthorized settings.

(k) Reduce water temperatures to lavatories.

(l) Install timers and/or occupancy sensors, as appropriate to cut off lights and equipment automatically.

(m) Use energy-efficient fluorescent lamps. Replace incandescent light bulbs with compact fluorescent

lamps. Select replacement lamps with high Color Rendering Index (CRI) lamps and reduce number of lamps where lighting level will be adequate.

(n) Participate in load-shedding programs of electric utilities.

(o) Clean lighting fixtures and replace lamps (with energy efficient lamps) on a regular maintenance schedule to maintain proper lighting levels.

(p) Reduce lighting levels during working hours to 50 foot candles at work station surfaces, 30 foot-candles in general office space not at work station surfaces, and 10 foot-candles in non-work areas, in conformance with 41 CFR 101. Eliminate unnecessary lighting. Turn lights off when not in use. Occupants in areas with computers and video display terminals may benefit from lower lighting level using parabolic fixture lenses (refer to Illuminating Engineering Society (IES) publications for guidance.

(q) Adjust system and equipment settings hourly, daily, weekly, or seasonally to obtain the most energy efficient operation, based on weather conditions and the system characteristics.

(r) Perform preventive maintenance and cleaning of HVAC equipment on a regular basis.

2.7.3 Energy Conversation Retrofit Actions

(a) Reduce heat conduction through ceilings, roofs, floors and walls by installation of insulation and vapor barriers.

(b) Reduce solar heat gain through roofs by installing reflective roof surfaces.

(c) Reduce heat conduction and long-wave radiation through glazing areas by installing storm windows or multiple glazed windows, by insulating movable windows, or by installing operable windows.

(d) Control solar heat gain through glazing areas by use of shading, tinted or reflective glazing or films, or by installing air-flow windows, or window screens with reflective/insulating characteristics.

(e) Reduce infiltration by caulking and weatherstripping doors and windows or constructing vestibules.

(f) Improve HVAC equipment efficiency (i.e., chiller, boiler, furnace, etc).

(g) Reduce energy used for tempering supply air by installing Variable Air Volume systems, or by resetting supply air, hot water, or chilled water temperatures.

SECTION 3.0 - NEW FEDERAL BUILDINGS

3.1 GENERAL

In accordance with NECPA, ARS shall reduce energy consumption in all Federal buildings, including newly constructed buildings. It is recognized that normally a direct design comparison is not possible nor are the climatic conditions, site, construction, and usage of any two buildings the same. It will not be possible, therefore, to make design modifications based solely on past experience. To achieve the reduced energy levels it will be necessary to apply new and strict standards to the design of new buildings.

3.2 CONSTRUCTION STANDARDS

In accordance with NECPA, all new Federal buildings shall be designed and constructed to comply with the energy performance standards in 10 CFR Part 435. The HQ/Areas/Locations shall adhere to the guides and criteria outlined below in the site selection and design of new buildings. This section will apply as well to those buildings constructed for the purpose of leasing to the Agency.

(a) **Design Guidelines**

The theory and general design considerations covered in Sections 2 through 12 of the GSA publication, "Energy Conservation Design Guidelines for New Office Buildings", should be reviewed and applied to new building designs wherever possible. The designs shall comply with the energy performance standards of 10 CFR 435.

(b) **Design Criteria**

The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbooks and Standards as well as 10 CFR 435 will be applicable to the design of all new ARS buildings and building systems.

(c) **Certification**

The design of new ARS building shall be certified by the design architect and engineer that the design complies with 10 CFR 435 as minimum criteria for energy performance.

SECTION 4.0 - LEASED FEDERAL BUILDINGS

4.1 GENERAL

The energy audit, survey, and retrofit provisions of NECPA apply to Federal buildings leased, in whole or in part. The NECPA stipulates that only those improvements (retrofit) that are life cycle cost effective shall be considered. The HQ/Areas/Locations shall consider conservation of energy and water in all operations of the Agency in leased buildings.

Energy conservation can be effected in ARS-owned buildings through retrofit and operational changes. ARS-leased buildings pose a particular challenge in our ability to effect cost effective energy conservation opportunities due to several factors. Opportunities for energy conservation vary considerably and are heavily affected by the term, size, cost of lease, cost of the proposed actions, administrative costs, and other leasing regulations.

A careful balance of administrative costs involved in the acquisition of space, energy survey analysis, and the net economic effect of energy saved should be a standard for energy conservation programs for ARS-leased facilities.

The following guides, applying to ARS leasing activities, have been developed within the spirit of the current applicable energy laws and Executive orders. They should be considered as minimal objectives and procedures by HQ/Areas/Locations in their implementation.

4.2 SCOPE

The procedures described below are applicable to the acquisition and permitting out of space and facilities by ARS. In applying these guidelines it is important to recognize that the document and/or administrative procedures used in the acquisition or permit process do not, in and of themselves, deter or prohibit affirmative conservation efforts. In addition, where occupancy is on an assignment basis, the occupying Agency must be made to cooperate to the fullest with the conservation activities of ARS.

4.2.1 GSA Assignments

In GSA-acquired leased space occupied by ARS, GSA is responsible for the development, implementation and reporting of conservation efforts as they relate to the facility. ARS is expected to participate in and cooperate with the GSA efforts to the fullest. To the extent practicable, the HQ/Areas/Locations shall develop and implement conservation actions (no or low cost) as they relate to their operation within the facility.

4.2.2 ARS Lease Agreements

ARS has delegated and legislative authority to enter into lease agreements to obtain space and facilities for its operations. For the purpose of this section, space and facilities occupied under a cooperative agreement will be treated the same as those obtained through leasing action.

While no formal energy conservation efforts should be conducted where the Agency does not pay for energy costs directly or where space is located in a building co-occupied with several other tenants, the HQ/Areas/Locations are encouraged to conserve energy through management or operation changes where appropriate.

4.2.3 Size of Lease

In a number of ARS lease actions, where the acquisition involves relatively small amounts of space, the dollar savings achieved through reduced consumption will normally not equal or exceed the cost of the action.

It has been established that the administrative expense of extensive leasing and monitoring procedures will exceed any cost savings achieved through resulting reduced energy consumption where the quantity of space is less than 10,000 gross square feet. Therefore, the audit and survey requirements of Section 2.0 and the certified energy analysis requirements of Section 4.3.2 below are not applicable to new leases or lease renewals for space quantities of less than 10,000 gross square feet.

For space quantities of less than 10,000 gross square feet, the energy survey requirements of Section 4.3.1 below should be reduced in scope commensurate with the administrative expense and apparent potential for energy conservation.

4.2.4 Term of Lease

The cost effectiveness of conservation actions taken is predicated on the life of the building, in this case the term of occupancy. Considering the applicability of life cycle costing, it has been determined that a retrofit investment, by the Government, will not normally be cost effective and should not be undertaken when the life of occupancy is less than 5 years. The audit, survey, and retrofit requirements of Section 2.0 will not apply to leases of less than 5-year firm term or to renewable 1-year leases with less than five renewal options remaining.

In the case of long-term leases exceeding these time periods and where the amount of space is 10,000 gross square feet or more (see Section 4.2.3 above), the audit and survey requirements will apply and cost-effective retrofit action shall be taken.

4.3 LEASING PROCEDURES

In the absence of size and/or lease term exclusions outlined in Section 4.2.3 and Section 4.2.4 above, positive actions by the HQ/Areas/Locations should be taken to ensure that facilities leased for ARS programs are energy efficient.

4.3.1 Lease Renewals

Prior to the renewal of leases, the HQ/Areas/Locations shall conduct an energy survey of the occupied building to determine its energy efficiency and retrofit potential. The scope of the survey must be commensurate with the size, cost, and term of the lease. Section 2.7 provides a checklist of potential energy conservation opportunities that can be used for this purpose. This process should also be applied to alternative locations considered in the pre-renewal canvas. All of the facilities should then be ranked according to the existing and/or anticipated efficiency and that ranking made a part of the total evaluation process.

If it is determined that renewal of the existing lease is in the best interest of the Government, the HQ/Areas/Locations shall negotiate with the lessor, prior to renewal, to identify and effect any actions that would increase the energy efficiency of the facility. In absence of voluntary action on the part of the lessor, and where cost-effective to the Government over the term of the lease, the HQ/Areas/Locations shall consider funding the retrofit actions.

4.3.2 New Leases

To achieve the objectives of this program, energy efficiency considerations shall be incorporated in solicitations for space and facilities to house ARS operations. The HQ/Areas/Locations shall treat these energy efficiency considerations as evaluation factors in determining the most beneficial offer.

For all offers of buildings not yet constructed, only those meeting or exceeding the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Standard 90.1 shall be considered as responsive. Verification that the design meets or exceeds this standard shall be furnished by the offeror through a registered architect or engineer or other qualified persons.

Adherence to this design standard will normally meet or exceed performance levels shown in 10 CFR Part 435, Subpart C, Mandatory Performance Standards for New Federal Residential Buildings. Specific energy budgets (BTU/Sq.Ft./Year), commensurate with the proposed duty cycles and/or operating schedule of the HQ/Areas/Locations, shall be provided by the designer for analysis purposes.

If existing space or facilities are being considered, the energy performance goals for the building, in the region in which it is located shall be established. Verification of this requirement will necessitate the offeror furnishing prior year utility data. This data shall reflect, or be adjusted to reflect the usage, hours of operation, etc., anticipated by the occupying ARS unit. In the absence of acceptable current performance, offerors shall be allowed to include proposed retrofit action, with their offer, designed to bring their facility within the acceptable performance range. The design verifications processes required for new buildings shall also be applicable to all such retrofit proposals.

4.3.3 Evaluation of Offers

In addition to the proposal requirements in Section 4.3.1 and 4.3.2, energy costs shall be made a part of the evaluation process for new and renewable leases. This can be readily achieved by prorating the usage data submitted to the square footage offered or by converting design BTU's to the current dollar value and then

applying to the square footage. This cost shall be added to the offered square foot cost for evaluation purposes.

4.4 MONITORING ENERGY CONSUMPTION

To ensure that energy efficiency is being achieved and maintained, consumption data is a prerequisite. Unless the lease is the fully-serviced type, leases shall include provisions for utility metering of the space or facility, if possible, with payment of the utility costs by the lessee. Annual consumption shall not exceed the levels made a part of the lease unless the operations of the Agency are the causative factor.

4.5 CONTINUING CONSERVATION EFFORTS

Irrespective of the amount of space or the term of the lease, the HQ/Areas/Locations shall be alert to and seek out potential energy conservation measures, on a continuing basis. Section 7.0 addresses methods of promoting employee involvement. Every effort shall be made to effect identified conservation measures through negotiation with the lessor.

4.6 PERMITTED OUT FACILITIES

Buildings and facilities "owned" by ARS yet permitted out shall be subject to the same treatment as those "owned" and occupied. The audit, survey, and retrofit requirements of Section 2.0 are applicable.

Where permittee have been allowed to construct buildings or facilities on Federal land they shall be urged to take action to improve the energy efficiency of the buildings and facilities.

Retrofit to bring the building in line with acceptable energy consumption levels shall be a part of the permit renewal process.

Permitted new buildings constructed on Federal land shall be constructed in conformance with the construction standards established in Section 3.0.

SECTION 5.0 - GENERAL OPERATIONS

5.1 GENERAL

EO 12759 and EO 12902 require implementation of Agency policies to increase energy efficiency in industrial facilities in the aggregate by 20 percent between FY 1985 and FY 2005 and to reduce Federal vehicle fuel consumption by 10 percent between FY 1991 and FY 1995. This area, General Operations, which includes all nonfacility energy consumption, annually accounts for more than half of the Agency's total energy consumption. The following provides the ARS strategy to achieve the goals of the EOs in the general operations categories.

5.2 VEHICLE TRANSPORTATION

Since gasoline consumption accounts for a large percentage of the Agency's energy consumption, the vehicle transportation sector is a prime target for conservation opportunities. EO 12759 required a 10 percent reduction in gasoline and diesel fuel consumption by FY 1995 from FY 1991 levels.

The following discusses the ARS strategy to achieve the 10 percent reduction in vehicle fuel consumption within ARS. A comprehensive energy policy shall be adopted for all vehicle resources of the ARS. This includes owned, GSA-leased, and commercially leased vehicles and equipment.

5.2.1 Owned and Leased Motor Vehicles

ARS owns and operates approximately 3,700 motor vehicles. Every effort shall be made to achieve the most fuel efficient mix of vehicles for the mission requirement and geographic location.

In concert with normal planning and programming, the HQ/Areas/Locations shall develop and implement procedures specifically directed at achieving energy efficiency in the management and operation of vehicles and equipment. As a minimum, the procedures shall address:

(a) **Fleet Mix**: Acquiring fuel efficient vehicles to meet mission requirements. These vehicles shall be of the minimum size, weight, and options necessary to complete the mission requirements of the Agency.

(b) **Coordination of Vehicle Use**: Procedures for trip planning, pooling, redistribution of vehicles and other methods of achieving the best utilization of vehicles.

(c) **Maintenance**: Procedures for an effective preventive maintenance program in accordance with manufacturers's standards, including regular tune-ups, wheel alignments, and keeping tires inflated to the pressure designated on the sidewall.

(d) **Use of Alternative Fuels**: Requirement for all ARS vehicle operators to use alternative fuels in ARS-owned or leased vehicles when the vehicle is a dual fuel vehicle or dedicated alternative fuel

vehicle and where available competitively at fuel facilities participating in the Defense Fuel Supply Center (DFSC) credit card program. In addition, the requirement shall ensure that all bulk storage tanks are filled with alternative fuels purchased through DFSC contracts. Alternative fuels include ethanol/gasoline (E85), methanol/gasoline (M85), compressed natural gas (CNG), Liquefied Natural Gas (LNG), and Liquid Propane Gas (LPG).

(e) **Operator Training**: A program to keep operators alert to fuel efficient-driving and operation techniques. This educational effort shall include such actions as driving at posted speed limits; avoiding sudden bursts of speed, tailgating, or pumping the accelerator pedal while the vehicle is not in motion; not idling the engine for long periods of time; elimination of unnecessary weight in the trunk or truck bed; and encouraging pooling and combining of travel needs.

The Office of Operations (OO), USDA, in conjunction with Procurement and Property Division (PPD), AFM, have developed the 1991 baseline. The OO and PPD will develop tracking systems, awareness programs, energy reduction guidance, initiatives or programs, and acquisition standards.

5.2.2 Vehicle Transportation Regulation

The Federal Property Management Regulation (FPMR) Temporary Regulation G-56 established the policies, procedures, and reporting requirements concerning the implementation of Section 10 of EO 12759. This regulation specifically outlined the vehicles included in the 10 percent reduction effort and Department of Energy (DOE), General Services Administration (GSA), and USDA responsibilities in achieving the fuel reduction requirement. As a part of FPMR Temporary Regulation G-56, OO submitted to DOE a plan to reduce petroleum-based fuel consumption by 10 percent between FY 1991 and FY 1995. A comparison in annual fuel usage will be made between the year 1991 and the year 1995.

5.2.3 Monitoring

The implementation and effect of these actions shall be monitored by PPD to determine the measure of conservation achieved. If after a period of time, it appears that they, in themselves will not be sufficient time to meet the 1995 deadline, then alternative actions will be necessary.

5.2.4 Vehicle Fuel Efficiency Outreach Programs

Section 9 of EO 12759 requires agencies to implement vehicle fuel efficiency outreach programs. To meet this goal, the HQ/Areas/Locations shall implement outreach programs such as ride sharing and employee awareness programs to reduce petroleum fuel usage by ARS employees and contractors where appropriate. Procedures shall be developed to make users of ARS motor pool vehicles aware of the ride sharing aspects of the program. The HQ/Areas/Locations shall distribute available information to employees regarding the other outreach ride sharing programs.

5.3 INDUSTRIAL/LABORATORY OPERATIONS

The industrial and laboratory operations of the Department and ARS are numerous and diverse, ranging from supply warehousing to centralized computer operations, from laboratory benchwork to mass micro-organism reproduction, from road construction to farm operations.

The OO will canvas the staff offices and the agencies of the Department to determine the type, extent, and location of various industrial and laboratory operations within the Department. Following an evaluation of that information, OO, in conjunction with the affected agencies, will develop appropriate energy guidelines.

The guidelines will detail conservation measures that can be taken on a general scale, not site specific. The intent will be to provide a checklist of the processes, procedures and equipment that should be examined, and possible actions to achieve optimum energy efficiency while maintaining a high level of employee safety and health.

In the interim, the Areas/Locations shall make every effort to reduce energy consumption within their industrial/laboratory operations wherever possible. Related surveys, evaluations, and conservation efforts, involving major industrial/laboratory operations shall be performed after the guidelines are made available.

SECTION 6.0 - PROCUREMENT OF GOODS AND SERVICES

6.1 GENERAL

The NECPA mandates development and implementation of a plan designed to speed the introduction of cost-effective, energy-efficient technologies into Federal facilities.

6.2 PROCUREMENT OF ENERGY - EFFICIENT PRODUCTS

In accordance with NECPA and EO 12902, ARS shall purchase energy-efficient products whenever practicable and whenever they meet the Agency's specific performance requirements and are cost-effective. To the extent cost-effective, ARS shall increase the purchase of products that are in the upper 25 percent of energy efficiency for all similar products or products that are at least 10 percent more efficient than the minimum level that meets Federal standards.

OMB in consultation with the Defense Logistics Agency (DLA), DOE and GSA shall annually update listings and guidelines of energy-efficient products and practices used in the Federal Government.

In order to implement these objectives the Procurement and Property Division (PPD), AFM shall:

(a) Distribute to each procurement office within ARS, the annual update of energy-efficient products and practices;

(b) As identified in FAR 23.203, contract solicitations shall contain an energy efficiency evaluation criteria.

6.3 GOVERNMENT-OWNED CONTRACTOR-OPERATED AND MAINTAINED FACILITIES

In accordance with EO 12902, all Government-Owned Contractor-Operated (GOCO) facilities shall comply with the goals and requirements of the EO. Energy and water management goals shall be incorporated into their management contracts.

ARS shall establish criteria for improvement of energy and water efficiency in facilities operated by ARS contractors or subcontractors. This criteria shall be used to encourage ARS contractors, and their subcontractors, which manage and operate Federally-owned facilities, to adopt and utilize energy conservation measures designed to achieve the energy efficiency and water conservation goals and requirements of NECPA and EO 12902.

Accordingly, the energy and water conservation goals and requirements of the NECPA and EO 12902 shall be

incorporated into their management contracts.

To satisfy this requirement, Procurement and Property Division (PPD), AFM, shall:

(a) Ensure that each operation and maintenance (O&M) solicitation will, to the extent practicable, contain an energy evaluation element.

(b) Require the contractor to monitor and report annual savings.

6.4 USE OF INNOVATIVE FINANCING AND CONTRACTUAL MECHANISMS

6.4.1 Demand-Side Management (DSM)

The term "Demand-Side Management (DSM)" refers to utility-sponsored programs that increase energy efficiency and water conservation or the management of demand. The term includes load management techniques.

The Areas/Locations shall review their procedures used to acquire utility and other related services, and to the extent practicable, remove any impediments to receiving, utilizing, and taking Demand Side Management (DSM) services, incentives, and rebates offered by utilities and other private sector energy service providers.

6.4.2 Energy Savings Performance Contracts (ESPC)

As authorized under Title VIII of NECPA, ARS shall establish and utilize, to the extent practicable, a program of incentives for conserving, and otherwise making more efficient use of energy, as a result of entering into Energy Savings Performance Contracts (ESPC).

The portion of the funds appropriated to the Agency for energy expenses for a fiscal year that is equal to the amount of cost savings realized by the Agency for such year from ESPC entered into under Title VIII of the Act shall be obligated to undertake additional energy conservation measures.

Under ESPC, a private energy service company provides the capital for energy efficiency improvements including the performance of energy audits, purchase and installation of new equipment, operation and maintenance of new equipment, and personnel training. In exchange for its investments, the contractor receives a share of the energy cost savings that result from the conservation measures over the term of the contract.

To the maximum extent practicable, HQ/Areas/Locations shall utilize ESPC and train its procurement and engineering personnel in ESPC by participating in the DOE's Federal Energy Management Program workshop on "Energy Savings Performance Contracting."

SECTION 7.0 - MOTIVATION

7.1 GENERAL

The accomplishment of the ARS Energy Management Plan and the efforts toward meeting the objectives of the energy conservation program are dependent on the motivation and knowledge of those involved. Management and employee awareness and commitment are essential.

7.2 MANAGEMENT COMMITMENT

ARS managers should have a continuing awareness of the national need for energy conservation, examine management decisions as to their impact on consumption, and monitor the efforts of ARS in developing energy management objectives and progress toward meeting those objectives.

7.3 EMPLOYEE AWARENESS

The success of the energy conservation program will be in direct relation to the understanding and commitment of all employees. The educated and committed employee will recognize the advantages of carrying out conservation actions within his or her home, thereby contributing to national conservation needs.

The HQ/Areas/Locations shall develop an employee awareness program. In addition to regularly scheduled staff meetings, the HQ/Areas/Locations are responsible for developing and/or obtaining energy conservation publications and/or posters directed at keeping employee awareness at a high level. Upon delivery of the material, HQ/Areas/Locations are responsible to ensure that it is distributed and utilized throughout their jurisdiction.

7.4 EMPLOYEE INVOLVEMENT

To the greatest extent possible, all ARS employees should be involved in the energy conservation program, recognized for their achievements, and provided assistance in carrying out conservation initiatives. The following are only a few directions that can be taken. The HQ/Areas/Locations are urged to seek out and initiate other employee involvement program actions.

(a) **Conservation Committees**

The HQ/Areas/Locations are encouraged to establish an energy committee, representing a cross section of the employees, at Headquarters, Areas, Centers, and Locations, and to the greatest extent possible involve the committee in energy management decisionmaking.

(b) **Awards Program**

The HQ/Areas/Locations shall institute an annual award program recognizing those employees who have contributed most to energy conservation within their jurisdiction. Priority consideration shall be given to those employees who have assisted the conservation program through their own initiative.

SECTION 8.0 - DATA COLLECTION AND REPORTING

8.1 GENERAL

It is in the interest of the Agency to limit reporting to the minimum necessary to ensure progress towards achieving the objectives of the program and to satisfy imposed external reporting requirements. To the greatest extent possible, existing systems, such as the Central Accounting System (CAS), budget processes, etc., will be utilized to satisfy these needs. As mandated by the Congress, DOE and other cognizant agencies, the following constitute the principal formal reporting requirements of the Department and the USDA agencies.

8.2 ANNUAL REPORT TO CONGRESS

The NECPA requires the Secretary of Energy to report annually on the progress toward achieving the goals of the Act. USDA input, a narrative report, will be transmitted to DOE by March 31 of each year. OO will have the responsibility for preparation of the Department's submission. As a minimum, agencies will be expected to report planned and completed facility retrofit actions, costs, gross square footage, performance of energy surveys, description of operations and maintenance procedures and commentary on progress toward meeting the mandates, including use of Energy Savings Performance Contracts (ESPC) and use of rebates. Each agency shall identify and list in its annual report any buildings in which energy intensive activities are carried out and which it is designating for exclusion. The agency's report shall be submitted to the Director, Office of Operations before March 15 of each year.

8.3 REPORT OF SURVEY AND RETROFIT PROGRESS

In order to meet the goals of NECPA and EO 12902, it is important that the comprehensive energy audits be accomplished as soon as possible after the completion of the preliminary energy surveys. Such actions will allow for timely programming and budgeting of building retrofit projects.

EO 12902 requires that comprehensive facility audits of approximately 10 percent of the agency's facilities are completed each year, and by FY 2005, the agencies shall install all cost-effective energy and water conservation measures with payback periods of less than 10 years.

The Department has no way of measuring the Agency's progress toward achieving the goals unless survey progress is periodically reported. To satisfy this need agencies will be required to submit an annual report of survey and retrofit progress to OO by March 15 of each year. The format for this report will be provided by OO. FD/PPD in conjunction with the Areas/Locations will have the responsibility for preparation of the Agency's submission.

SECTION 9.0 - BUDGETING FOR ENERGY MANAGEMENT

9.1 GENERAL

The NECPA and EO 12902 require certain immediate conservation measures. If these actions are to be carried out, the Agency shall allocate adequate funds to accomplish the surveys and audit requirements of the laws and orders and the installation of cost-effective energy and water conservation projects between FY 1996 and FY 2005.

The HQ/Areas/Locations in conjunction with the annual HPRL preparation shall proceed immediately with programming and budgeting for energy and water conservation. Not only does this serve to meet the objectives of this energy management plan and related statutes and directives, the resulting subsequent operational cost avoidance will also serve to meet the objective of reducing overall outlays.

Unlike other established programs of this nature, the funding priorities and processes for energy conservation activities are impacted by three factors:

(a) If ARS is to meet the building retrofit requirements of the NECPA and EO 12902, immediate funding of some actions will be necessary;

(b) The NECPA stipulated that agencies must budget for energy conservation actions.

(c) As is expressed in Section 8.0 of this Plan, it is the intent of ARS to maximize the use of the existing management system in fulfilling its energy program monitoring and reporting needs.

9.2 BUDGET SUBMISSIONS AND REVIEW

The requests for energy conservation related funds shall be supported by a life cycle costing documentation.

FD, in conjunction with its review of the annual HPRL shall ensure that Area/Location requests for energy retrofit funds are consistent with the objectives of this Energy Management Plan.

LIST OF APPENDICES

APPENDIX 1

Preliminary Energy Survey Worksheet

APPENDIX 2

Part 3 of Title V of the NECPA as amended by the Federal Energy Management Improvement Act of 1988 (PL 100-615) and the Energy Policy Act of 1992 (PL 102-486)

APPENDIX 3

Title VIII of the NECPA as amended by the Energy Policy Act of 1992 (PL 102-486)

APPENDIX 4

Subtitle F the Energy Policy Act of 1992 (PL 102-486)

APPENDIX 5

Executive Order 12759 (1991)

APPENDIX 6

Executive Order 12902 (1994)